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# Influenza Surveillance Report – 2019-2020 Season – Week 41

## Data from September 29, 2019 to October 12, 2019

**Introduction**

The purpose of this report is to provide ongoing description and assessment of the activity and types of circulating influenza viruses, and to assess morbidity, hospitalization and mortality related to influenza. It is meant to provide healthcare providers and facilities, public health professionals, policy makers, the media and the public with a general understanding of the severity and burden of the current flu season on a weekly basis in Nevada and nationwide. Data from several surveillance programs analyzed in this report is provisional and may change as additional information becomes available.

If you have questions or comments about this report, are interested in having your medical facility join the sentinel provider program, or have any questions about your facility's participation or reporting, please contact Ashleigh Faulstich, MPH at afaulstich@health.nv.gov or (775) 684-5292.

**Influenza activity in the State of Nevada is presently local**: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of the state.

Table 1:

| Week 41 Summary | | | | | |
|---|---|---|---|---|---|
| | ILI Current Activity | ILI Activity Baseline | Influenza -related Hospitalization | Influenza -related Mortality | Pneumonia and Influenza Mortality |
| Nevada | 0.87% | 1.36% | 8 (0.3 per 100,000) | 1/321 (0.31%) | 15/321 (4.67%) |
| Region 9 | 1.54% | 2.40% | pending | 2/5966 (0.03%) | 318/5966 (5.33%) |
| National | 1.54% | 2.20% | pending | 7/30339 (0.02%) | 1434/30339 (4.73%) |

**Local Health Authority (LHA) reports**

Weekly influenza reports from the three LHAs are available on the respective websites:

- Southern Nevada Health District: https://www.southernnevadahealthdistrict.org/stats-reports/influenza-surveillance.php
- Washoe County Health District: https://www.washoecounty.us/health/programs-and-services/communicable-diseases-and-epidemiology/statistics_surveillance_reports/influenza-surveillance/index.php
- Carson City Health & Human Services: Western NV Regional Influenza Report: http://gethealthycarsoncity.org/seasonalflu/

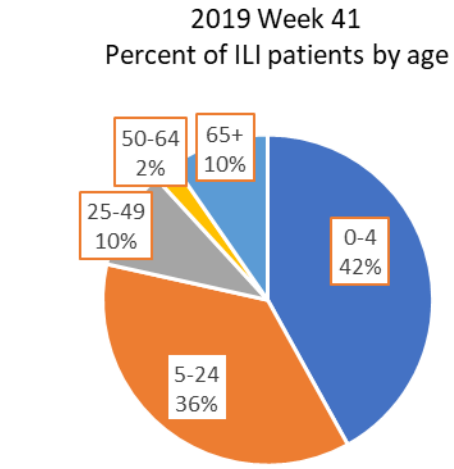
**Sentinel Provider Program Description**

The sentinel provider program is a partnership between clinicians, healthcare facilities, local health authorities (LHA), the Nevada Division of Public and Behavioral Health, and the Centers for Disease Control and Prevention (CDC). Sentinel providers voluntarily submit a weekly report to the CDC of the number of patients seen at their facility with influenza-like illness (ILI) by age group as well as the total number of patients seen for any reason. ILI is defined as fever (≥ 100°F, 37.8°C) in the presence of cough and/or sore throat without a known cause other than influenza. Sentinel providers may also submit nasal, throat, and/or nasopharyngeal swabs for selected patients to the Nevada State Public Health Laboratory (NSPHL) for viral testing and subtyping at no cost to the patient or provider.

**Sentinel Provider Influenza-Like Illness (ILI) Activity:**

**Figure 1** shows the percent of ILI patients by age group for week 41. Those age 0-4 represented 42% of all reported ILI cases in Nevada. 36% of cases were ages 5-24, 10% ages 25-49, 2% ages 50-64, and 10% ages 65 and older.

Figure 1:




In week 41, 10,718 patient visits were reported by sentinel providers in Nevada, of which 93 met criteria for ILI, representing 0.9% of the sample. ILI activity was below the Nevada baseline of 1.4%. **Figure 2** shows the percent of reported visits statewide for which the patient met clinical criteria for ILI. The current influenza season (2019 week 40 – 2020 week 20), in bold, is overlaid with the prior four seasons.

For week 41, 1.5% of patients reported in Region 9 (AZ, CA, HI, NV, and US Pacific Islands) and 1.5% of patients reported nationally met criteria for ILI. The regional activity level is less than the regional baseline of 2.4% and the national activity level is less than the national baseline of 2.2%.

**Figure 3** displays a comparison of the percent of visits which met ILI criteria for Nevada, Region Nine, and nationally.

Figure 2.

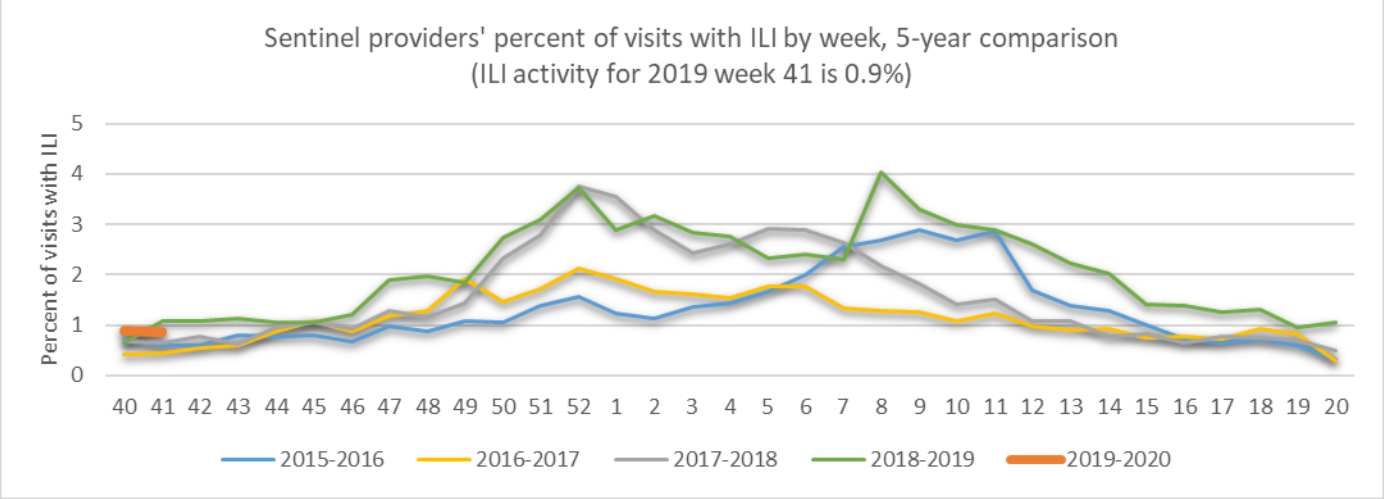
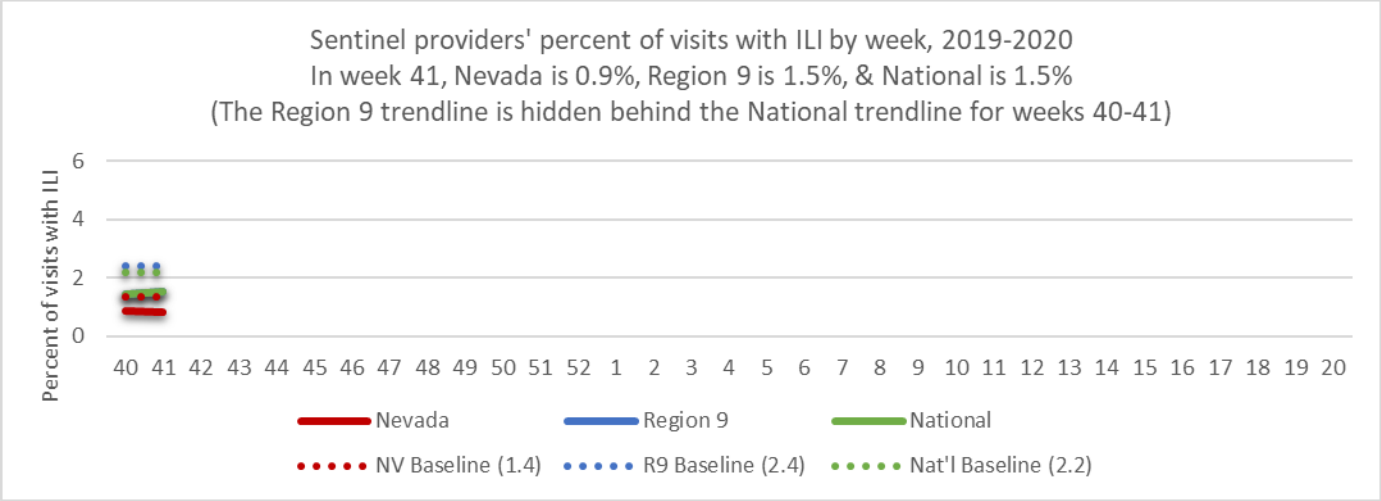


Figure 3.




**Sentinel Providers Virologic Testing**

The Nevada State Public Health Laboratory (NSPHL) and other laboratories provide influenza virus testing and subtyping for specimens submitted by sentinel providers. For week 41, eight specimens were positive of 30 submitted (27%). From week 40 to date, eight specimens were positive of 42 submitted (19%). **Figure 4** shows the number of laboratory-confirmed influenza cases by subtype expressed as a percentage of all laboratory-confirmed specimens tested. Of the eight positive specimens to date, seven were typed as influenza A (H3N2) and one as B (subtyping not performed). **Table 2** shows the number of sentinel site specimens tested by laboratory this season and the number and percent positive for influenza of any type.

Figure 4:

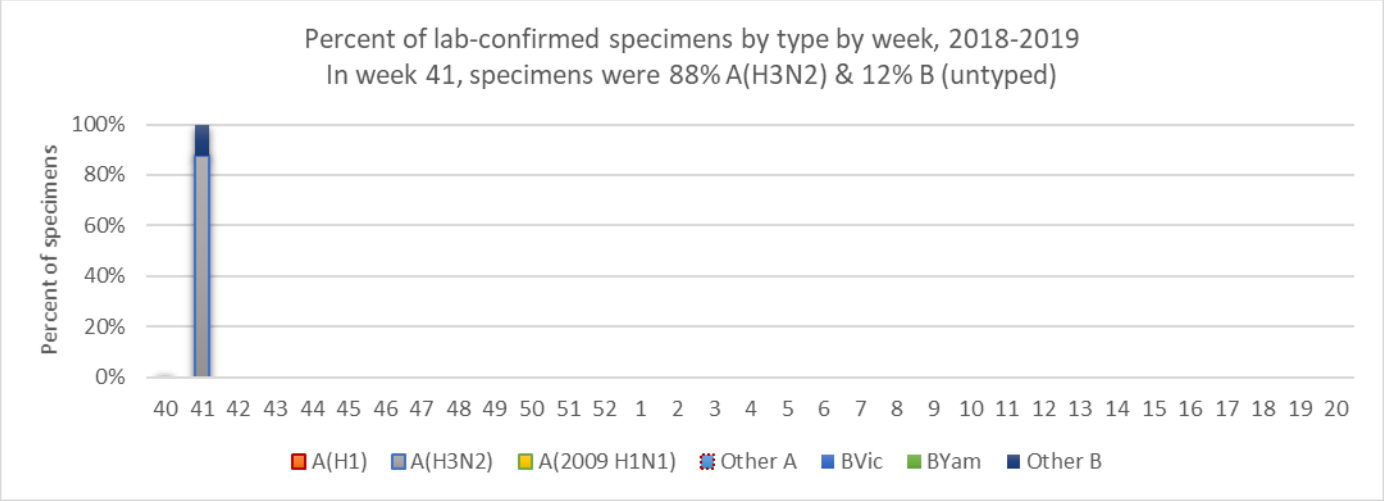



Table 2:

| Lab | # of tests performed | # positive | % positive |
|---|---|---|---|
| Nevada State Public Health Lab (NSPHL) | 14 | 7 | 50% |
| Southern Nevada Public Health Lab (SNPHL) | 4 | 0 | 0% |
| All other labs | 24 | 1 | 4% |
| Total | 42 | 8 | 19% |

**Influenza Hospitalizations**

LHAs investigate and report to DPBH Influenza-associated hospitalizations. **Figure 5** shows the number of patients hospitalized with influenza by jurisdiction. In week 41, Washoe County Health District reports three, Southern Nevada Health District reports five, and Carson City Health and Human Services and Rural Health Services each report none. From week 40 to date, nine total hospitalizations have been reported statewide. **Figure 6** shows the number of hospitalized patients by influenza type, if reported. For week 41, two patients were type A with subtyping not performed and one patient had type B with subtyping not performed; type information was not yet available for the others.

Figure 5:

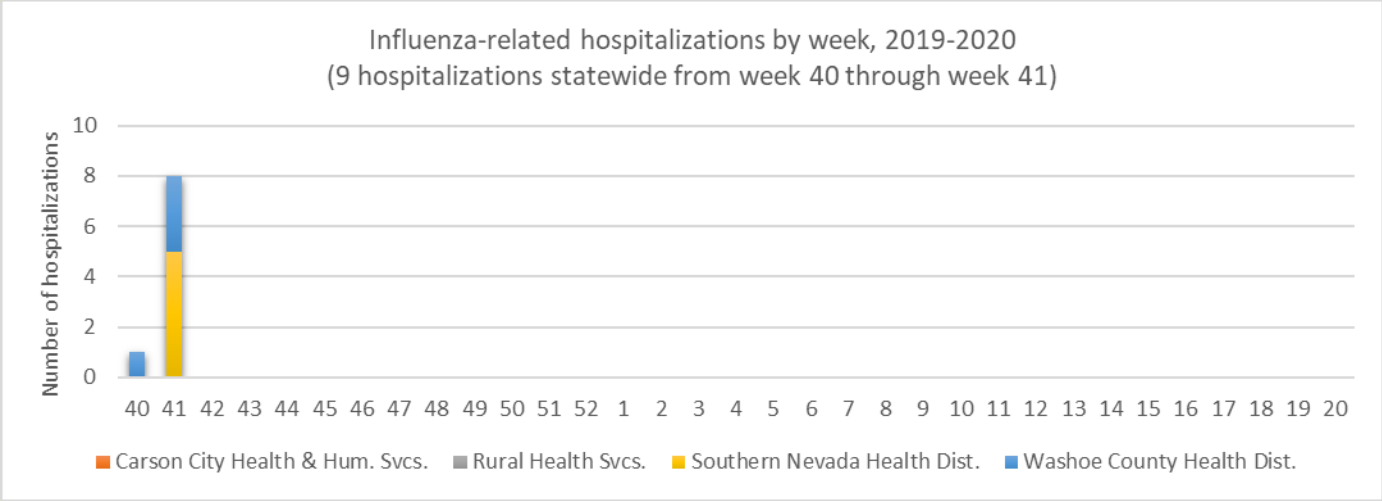
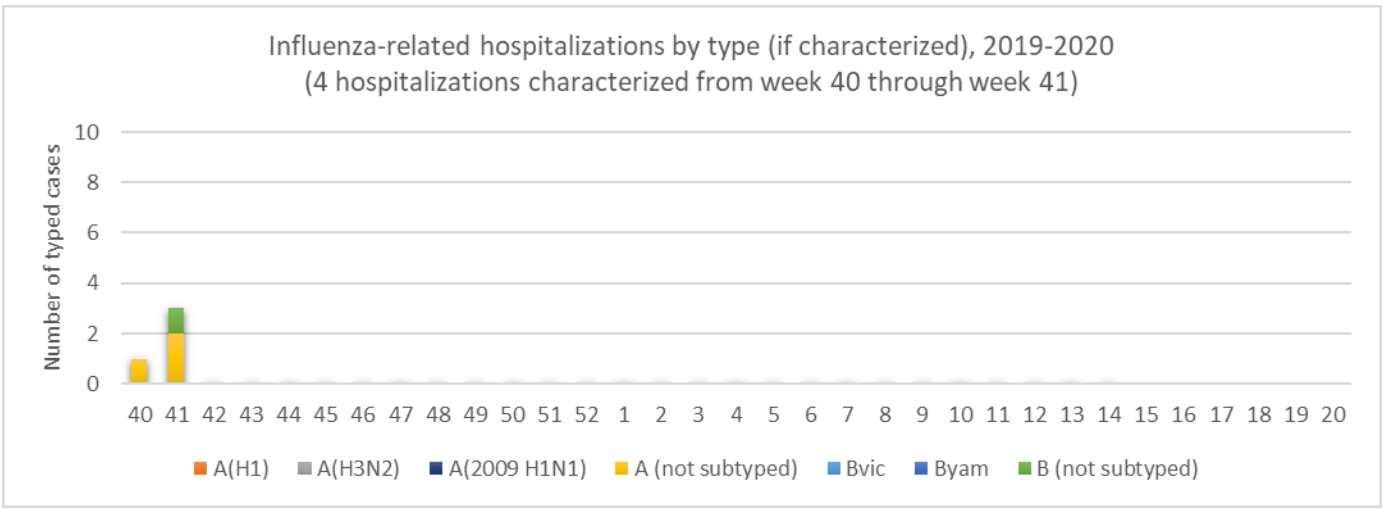


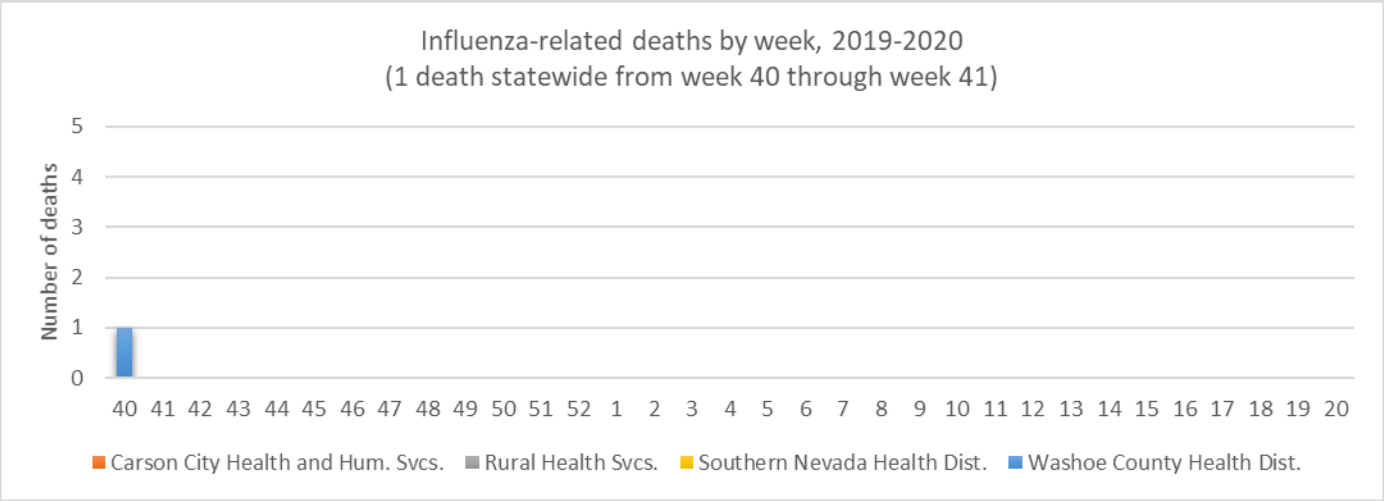

Figure 6:



**Influenza Deaths**

Influenza-associated deaths are deaths from a clinically-compatible illness that was confirmed to be influenza by an appropriate laboratory or rapid diagnostic test with no period of complete recovery between illness and death. LHAs investigate all influenza deaths and typically review medical records retroactively up to 30 days from the date of death for an influenza diagnosis. **Figure 7** shows the number of influenza deaths by region for this flu season. No deaths were reported in week 41. There has been one influenza-associated death reported statewide since week 40.

Figure 7:




**Syndromic Surveillance**

Syndromic surveillance uses near real-time, pre-diagnostic health data to analyze disease incidence. It may support the identification and characterization of outbreaks as supplemental data or as an early indicator of a possible outbreak. DPBH uses the National Syndromic Surveillance System (NSSP) Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE), a CDC web application, to collect these data from hospitals and urgent care facilities within the state. Chief complaint is used for immediate analysis; discharge diagnosis is used as it becomes available.

**Syndromic Surveillance ILI Activity**

**Figure 8** shows the number of visits with ILI for emergency, inpatient, and outpatient settings. For week 41 there were 389 emergency visits, 17 hospital admissions, and 234 outpatient visits reported. Emergency department visits increased by 14% from 340 in week 40. **Figure 9** shows the percent of all visits with ILI by age group. For week 14, 28% of visits were for ages 0-4, 33% for ages 5-24, 24% for ages 25-49, 8% for ages 50-64, and 7% for ages 65 and up.

Figure 8:

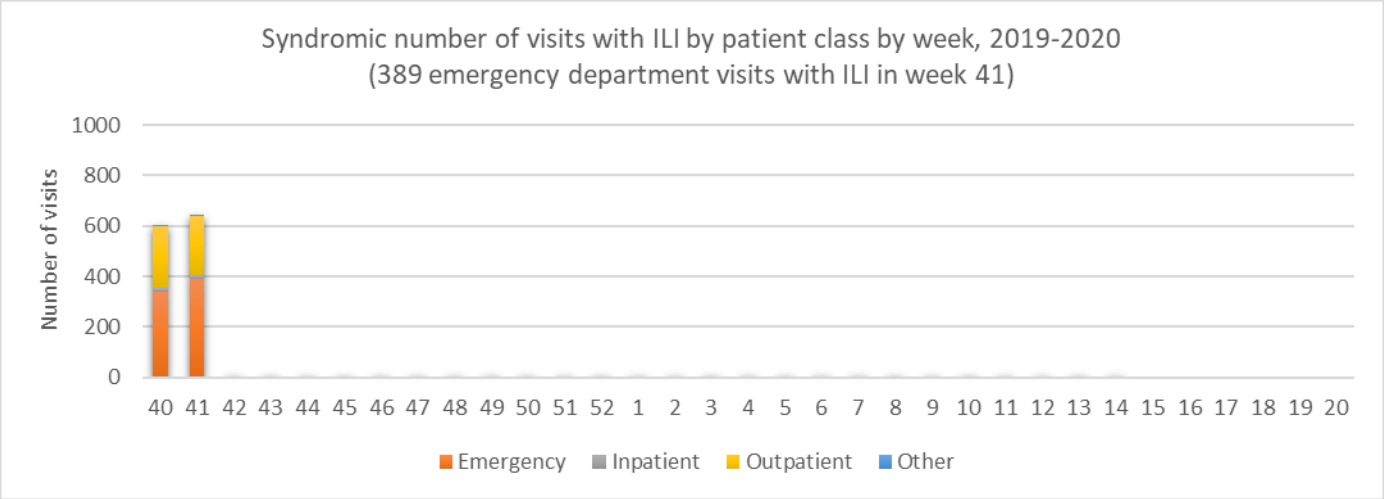
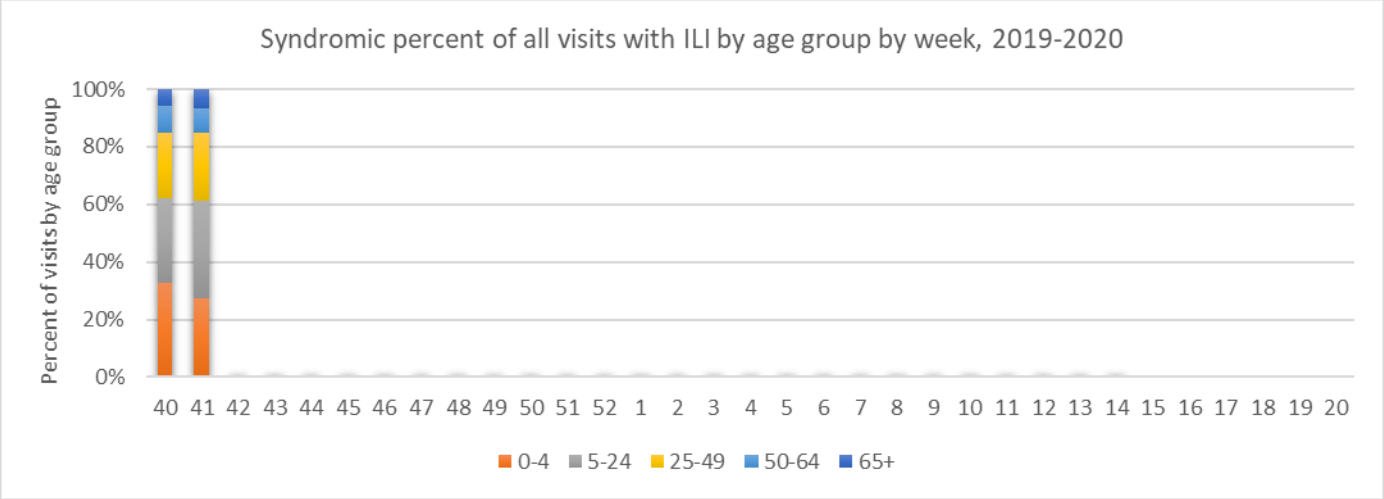



Figure 9:




**Pneumonia and Influenza (P&I) Mortality Surveillance**

Death certificate data are used to calculate pneumonia and influenza deaths. The Division of Public and Behavioral Health is presently evaluating its data extraction methodology and will report P&I deaths in the future from internal data.

The CDC makes P&I death information available in its FluView Interactive GIS application. According to data from the CDC, Nevada's P&I mortality is 4.67% of all deaths reported (15 out of 321) for the most recent week. Region 9's P&I mortality is 5.33% of all deaths reported (318 out of 5,966), which is below the baseline of 5.9%; nationally 4.73% of all deaths are due to P&I (1,434 out of 30,339), which is below the baseline of 5.3%. Region 9's influenza-related mortality is 0.03% (two out of 5,966) and nationally 0.02% of all deaths are influenza-related (seven out of 30,339).

**References**

Figures 1, 2, and 3, and Table 1 are derived from ILINet sentinel surveillance data submitted by sentinel providers directly to the CDC.

Table 1 also uses data from CDC's FluView Interactive GIS application.

Figure 4 and Table 2 use ILINet laboratory surveillance data.

Figures 5, 6, and 7 are compiled from data collected by local health authorities and abstracted from medical records.

Figures 8 and 9 are populated from the National Syndromic Surveillance System (NSSP) Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE).